# A Memetic Paradigm of Project Management

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## Abstract

This paper aims to fuel the discussion on examining project management research from different perspectives. A new *memetic* approach to project management is presented that promotes a new way to examine the discipline of project management. Project management is claimed to be a memeplex with the language and stories of its scholars and practitioners at its core; shaping and restricting human behaviour, and creating impoverished mental models of project management. The paper suggests that a new memetic approach to project management will help lift restrictions imposed by the traditional research approach, and enrich our mental maps of project management to serve us better.

**Keywords:** Memetics; Project management research

## 1. Introduction

Despite decades of research and experience, project management (PM) still fails to live up to the expectations of stakeholders as they continue to be disappointed by project results [1], [2] and [3]. Söderland [4] and others [5] and [6] argue that a possible cause for poor project results is that scholars and practitioners still do not really understand the nature of projects, and that too much research effort has been directed towards clarifying the reasons for project success and failure, while downplaying research on why projects exist and behave as they do. Moreover, Söderland [4] suggests that to highlight the weaknesses of current PM research we should be pursuing questions such as; Why do project organisations exist, why do they differ, and how do they behave? What is the function of, or value added by, the PM unit? However, these questions still presuppose that we understand what a project is, and what the management of one means.

I believe we will not find answers to these questions or further our understanding of projects and their management by using our current research approach to PM [7] and [8]. I suggest a new "memetic" approach is required. One that requires us to consider that most of what we call a project and what it is to manage one is an illusion; a human construct about a collection of feelings, expectations [9], and sensations, cleverly conjured up, fashioned, and conveniently labelled by the human brain. Moreover, it requires us to consider that our reasons for using projects and PM are not consciously driven to maximise profit. Scholars and practitioners will be required to consider PM as naturally occurring, self-serving, evolving and designing organisations for its own purpose. Abandoning our current PM knowledge will not be required; however a memetic approach will compel us to examine it, redirecting our

attention to previously hidden aspects of PM enquiry. Rather than posing questions such as "why do project organisations exist," we can ask, "what are we able to see, think, or talk about if we conceive PM in a memetic way?"

Throughout this paper I refer to a traditional approach to PM research. Traditional meaning the current approach, with underlying mental models which have been extended with many variations on a theme to inform management theory [10]. These traditional models regard organisations as human constructs. An underlying assumption of a traditional approach to PM research assumes that an organisation is an entity in its own right, with structures and systems that can be changed for the purpose of organisational improvement.

In this paper I will put forward an argument for a change from the traditional to a memetic approach to PM research. Such an approach will make an impact on many aspects of PM, such as; how it evolves, how it is studied and practiced, the role of the project manager, the project team and the profession. Moreover, it will make an impact on our view of the PM body of knowledge (BoK) and the role of project organisations. Table 1 summarises aspects of PM that are discussed in detail in this paper, highlighting the traditional vs. memetic approach to PM, and emphasising the impact of a new memetic paradigm.

**Table 1**
Impact of memetic approach to aspects of project management

| Aspects of PM | Traditional approach | Memetic approach | Impact of memetic approach on PM |
|---|---|---|---|
| Evolution | PM evolves for the good of the organisation and individual | PM evolves for the good of the PM memes | PM is self-serving. It does not serve the individual or organisation |
| Study and practice | PMBOK® is a human construct, consciously designed, created and implemented | PMBOK® has evolved by memetic selection. PMBOK® alters its environment to increase the number of projects | PMBOK® validity reduced |
| Project manager/ Project team | Strategy to implement organisational objectives | Actors created by PM memes | Traditional role of project manager is questioned. Team creative output is a product of memetic evolution |
| Profession | PMI® is a human construct, consciously designed, created and implemented | PMI® has evolved by memetic selection to spread PM memes | The PMI® is the way the PM memeplex spreads PM |
| Knowledge creation | Knowledge is constructed by a social system (scholars and practitioners) | Knowledge processes (memes) construct social systems (scholars and practitioners) | A new way of questioning the bastions of PM knowledge |
| Project organisations | Project organisations are human constructs, consciously designed and created | Project organisations are created by the replicating behaviour of PM memes | Project organisations will prevail at the expense of the individual |

## 2. Traditional vs. memetic approach

There is a major difference between the traditional approach and a memetic approach to PM research which can be illustrated by describing the shift in scientific thinking about the theory of evolution during the mid-20th century.

Traditionally, biological evolution considered evolution occurring for the good of the species. Random genetic changes produce mutations in offspring, enabling a species to innovate and adapt to a changing environment, and natural selection eliminates unfit organisms from the landscape as a result of competing for finite resources.

Theories of cultural evolution have drawn strong parallels between biological evolution and the evolution of civilization, economy, and culture [10], [11] and [12]. A traditional approach to cultural and economic evolution considers evolution occurring for the good of the organisation (species). Individuals (organisms) and organisations (species) are considered to compete against each other for finite resources and adapting to the economic landscape [12] and [13]. Fullmer [13] uses this traditional approach when arguing that one organisational structure for successful adaptation is the use of teams and PM.

In the mid-20th century a new "selfish-gene" approach to biological evolution began that considers evolution occurring for the good of the genes [14]. In this approach it is the genes which are successful, or not, at replicating and getting passed on into the next generation. All biological life therefore, with all its complexity and subtlety is driven by the replicating behaviour of genes.

Dawkins [14] takes this point beyond biology to cultural life suggesting that "all life evolves by the differential survival of replicating entities". Moreover, he and others [15] and [16] argue that there are non-biological or cultural replicators – memes. Memes can be considered to be recipes or instruction manuals for doing something cultural [15]; behaviours, words, or sounds that are copied from person to person. A memetic approach to cultural and economic evolution considers evolution occurring for the good of the memes. All cultural life therefore, including PM, is driven by the replicating behaviour of memes.

To apply memetic theory to PM we must treat memes as replicators in their own right. Within the context of PM, the evolution of ideas, concepts, theoretical models, methodologies and practices are all behaviours driven by self-interested memes. This is the major difference that separates a memetic approach to PM research from more traditional theories and methodologies.

Traditionally, PM is considered to be a conscious initiative, a means for individuals or organisations to control and adapt to their environment, and to make sense of the world in a reductionist way. Memetic theory suggests that PM behaviour is driven by our interpretation of reality; a reality largely created by the language we use.

# 3. How we make sense of our world

The world is too complex for human beings to understand, so we do not operate directly or immediately upon it, but rather we create mental models or maps of the world, and use these maps to guide our behaviour [17] and [18]. Moreover, humans use a number of representational systems to build their mental maps; one of the most significant is language [18].

## 3.1. Mental models

Senge [17] suggests that these "tacit mental models exist below the level of awareness as images, assumptions, and stories which we carry in our minds of ourselves, other people, institutions, and every aspect of the world." Like an optical lens subtly distorting our vision, our mental maps determine what we see; and all of these mental maps are flawed in some way. Individuals therefore, including practitioners and

academics, have incomplete or erroneous mental maps of PM. Moreover, these mental maps are created by the culture they are immersed in, and the language they use.

## 3.2. Language use

Words, as influential as they may be, are really only imperfect labels for our human experiences. Humans are able to use social linguistics to categorise, organise, and filter their experience. Kofman [19] suggests "that language is a medium through which we create new understandings and new realities, as we begin to talk about them. While a speaker creates language, language is also creating the speaker. In fact, we do not talk about what we see; we see only what we can talk about". Our language therefore shapes the landscape of our mental maps; and our mental maps filter our experience and subsequently shape our language use.

Bandler [18] illustrates an example of this by describing how the human mind converts a sensation into a thing. "In the ordinary sentence: *The book is blue*. Blue is the name that we, as native speakers of English, have learned to use to describe our experience of a certain portion of the continuum of visible light. Misled by the structure of our language, we come to assume that *blue* is a property of the object that we refer to as book rather than being the name which we have given our sensation."

I suggest the human brain has similarly misled us with PM. The language of the Project Management Institute (PMI[®]) through its 'Guide to the Project Management Body of Knowledge' (PMBOK[®] Guide) [20] defines a project in terms of its distinctive characteristics – "a project is a temporary endeavour undertaken to create a unique product or service". In this context, temporary means a limited period of time, and unique means that the product or service is different in some distinguishing way from others. In this definition a project is described as a collection of characteristic or attributes. However, neither the notion of a limited time period, nor uniqueness is a noun. The attributes of a project are all highly subjective. Projects are simply a synthesis of human sensation and expectations about how multiple resources are to be used. Viewing a project this way enlightens us to the fact that neither manager, team members, nor stakeholders are driving the project; the project is driving them.

## 4. Impact on study and practice of project management

As scholars, it is crucial that we recognise and acknowledge how the language used by PM scholars and practitioners is constructing our mental model of projects and PM [21], restricting what we observe by the language they employ. In an implicit manner, the knowledge of the PM community has already set a course for our line of enquiry, subtly directing our attention to concepts and practices deemed critical. New discoveries made in traditional PM research are therefore described in terms of, and with reference to, our generally accepted professional guide, such as the PMBOK[®] Guide. Memetically, the PMBOK[®] Guide is considered to be a vehicle for recording and propagating a recipe for creating projects. It and other popular PM books [22], [23], [24] and [25] structured around the PMBOK[®], are repositories for memes in the form of ideas, methodologies, and stories that have survived memetic selection, and are copied from one person to another in the long history of human attempts to understand and organise the world. The stories we construct to make sense of our experience, to give meaning to our actions and thoughts, are stories we have learned

to construct [26]. These learnt PM stories, I suggest, are determined by the memes of PM scholars and practitioners. One story is that of the project plan, which traditionally serves the project manager as a map of the route from project start to finish [22]. However, memetics provides us with an alternative view of the project plan, exposing it as a language filter, limiting the project manager's experience and restricting their description of the project and its progress to generally accepted PM terms in an existential manner.

Traditionally the PMBOK® is considered to be consciously designed, created and implemented. Memetically it has evolved by memetic selection. This presupposes no design, only the appearance of it. Moreover, the PMBOK® through its application by practitioners is altering its environment to secure its own survival. It does this by influencing how practitioners are taught, and how organisations are constructed so as to increase the number of projects created. Having exposed the PMBOK® as self-serving its validity as a useful tool to individual practitioners must be questioned. The language (memes) of the PMBOK® and the behaviour it drives must be examined by a memetic approach. Doing so, we will enrich our mental model of the discipline of PM, and make visible that which had previously been outside of our collective awareness.

## 5. Impact on views of project managers and project teams

Kloppenborg and Opfer [27] highlight how PM is used in all aspects and areas of commerce and industry, and predict this trend is likely to continue. They suggest "this increase is a genuine focus by executive management to improve their chances for success in both return-on-investment and in the quick and economic development and release of new products and services to the marketplace". Moreover, they suggest that the role of the project manager will be vital to the implementation of corporate strategies and objectives.

Traditionally, the role of project manager is someone who consciously negotiates with project stakeholders, keeps the peace among team members, and tries to keep calm while all around them is chaos; while budgets and Gantt charts are not the main parts of the role [22]. Whilst the purpose of the project manager is to normalise conflict to a level where it is socially approved, the upwardly mobile project manager needs crisis to be managed and unique and special events to display a presence [28].

Memetically, the role of project manager is a product (actor) of all the memes that have successfully entered the adaptive organisation [13] memeplex (a term used by Speel [29] for groups of memes that replicate better as a group). In this context the project manager's role is that of a copying machine, copying memes such as; time is money [30], fail to plan is a plan to fail [31], the project life cycle [32], and Tuchman's [33] team-development sequence, and all this and more in a select environment, in a vast evolutionary process driven by competing memes. A memetic approach would enable the "project manager" meme to be examined and the role of project manager to be questioned. In the future the value of such a role might be greatly reduced if the memes that create the environment of conflict required for the role of project manager to exist were to be identified and removed by fitter memes.

Traditionally, effective teamwork is seen as a key success factor in deriving a competitive advantage on the organisational landscape [13] and [34]. A team can be described as a social construct, a group of individuals who have come together for a definite purpose [35]. When asked to talk about their project team project managers inevitably talk about the skills and attributes of the individual members. The PMBOK® Guide supports this expression by presenting information as if the parts of a team are the sum total of its existence. However, we cannot grasp the functionality of the whole by just looking at its parts [36]. Similarly, we cannot describe the effectiveness, character, and culture of a project team by describing its individual members. There is no such thing as human nature independent of culture suggests Geertz [37].

Memetically, project teams are an effective means of replicating, evolving, and spreading PM memes. The role of the project team is critical to the whole project process. However, the team's creative role can no longer be considered to be the sum of independent thinkers creating new ideas and solutions. Rather the project team is a copying machine, part of a vast evolutionary process, driven by the competition between PM memes. Does this mean that the project team is somehow on automatic pilot, a servant to the memes? I suggest not. A creative role for the project team still exists. A deep misunderstanding of Darwinian thinking is the idea that whenever a human phenomenon is given an evolutionary explanation, whether it be genes or memes, we must deny that people think [15]. Thinking is crucial! PM memes cannot be put through the test of memetic selection on their own; they require their human hosts to run the evolutionary algorithm – to think. Memes are tools for thinking, and they have to be used in order for them to generate behaviour [15]. Memetically, we can view any creative output of a project team to be the result of an evolutionary algorithm, where memes are communicated, mutated, and undergo the process of memetic selection.

## 6. Project management memes: A holistic view

Dawkins [14] argues that knowledge actively pursues goals of its own. This view is called memetics, the flow of ideas (memes) from one mind to another. The Oxford English Dictionary defines a meme as an element of culture that may be considered to be passed on by non-genetic means, especially imitation. Memetics presupposes that knowledge can be transmitted from one subject to another, and thereby loses its dependence on any single individual [38]. Instead of seeing knowledge as constructed by a social system, as social constructivism would [39], memetics defines social systems as constructed by knowledge processes.

To understand the meme paradigm or "meme view" in a natural sense it is necessary to suspend our normal model of the world. For example, consider a song as something that competes with other memes for access to the human brain. Once whistled, the meme has successfully replicated and achieved its purpose. Memes of course are not conscious, so they do not construct strategies to replicate, in the same way that genes are not conscious. Biologists however, find it useful to construct a metaphor that considers genes as active agents strategising to replicate themselves, but in reality, natural selection preserves those genes that happen to "act as if" they are pursuing a strategy. The human mind, like it or not, is a host and breeding ground for memes [14], [15] and [16].

## 7. A better approach: Project management memeplex

Conceptualising PM as a memeplex presents scholars and practitioners with new ways of seeing and thinking about projects and their management, consequently providing new contexts for action in which individuals and organisations can express themselves and act. Previously hidden dimensions of PM can be exposed, and memes that are true or useful can be isolated from those that are false and misleading.

One characteristic of a memeplex is that false memes get copied along with true memes, as memes do not need to be true to be successful [16]. A memetic approach will highlight what in our current PM knowledge is based on fact, tradition, or authority. Moreover, it will enable us to discover the memes that are involved in creating PM behaviour.

The PM memeplex has a legacy of memes from its roots in construction and continues to absorb economic and financial memes which posses great authority in capitalist societies. An example of this is the "bottom line" meme which is particularly dominant in management conversations. Moreover, organisational experts use memes such as; "assets-to-liabilities", "return-on-investment", "return-on-equity", "after-tax-profit". All of these are regarded as established means of determining whether an organisation is fit and healthy. Frame [40] suggests that for the field of PM to evolve into the mainstream of corporate management, new project managers will have to be versed in both the financial implications, and the "return-on-investment", of the project endeavour. I suggest that a memetic approach to PM will uncover that a large amount of memes in the PM memeplex are today being generated and replicated by University Business Schools. Moreover, as we continue to define organisational success in monetary terms our education systems (tertiary and secondary) seem more naturally an extension of corporate training [28]. Hewlett-Packard's 'Mission: Project Management' (MPM) is an example of this which uses a business-based model to teach school teachers and student task scheduling, group roles and responsibilities, time and project management [41]. Left unchecked, the "managerialist" memes will drown out non-management perspectives and stories.

### 8. Impact on the project management profession

A memeplex characteristic of PM is evident in the formation and membership of PM institutes and their journal publications. PM is finding its own feet in the world through its institutions, carefully defining its boundaries and establishing its knowledge base [42]. The Australian Institute of Project Management (AIPM) is a case in point. To be a member one needs to demonstrate at least five years relevant experience in PM (but not necessarily as a Project Manager) and have a minimum standard of education, or have successfully completed a PM course recognised or accredited by the AIPM [43]. Either way, an AIPM member is almost swearing an oath to, or declaring a belief in, the acceptance of PM knowledge as defined by its membership. In reality, individual project managers and project organisation may come and go, but the memeplex called PM continues to create our language and shape the landscape of our individual and collective mental maps. This is an example of the PM memeplex altering its environment in a way that increases the chances of it being replicated. It does this by imbedding within itself instructions to pass it on [44], and by describing itself as indispensable to those who use it [45] and [46]. Moreover, the

PM memeplex incorporates useful laws for business conduct such as professional ethics [22], [47] and [48] that bind its practitioners into its professional community and consequently enhance their commitment to the profession [49].

A memetic approach to PM uncovers the missions of institutions such as PMI[®] and AIPM, which are to spread PM, shaping the behaviour of their membership, reconstruct organisations to facilitate this, and all this without paying attention to the needs of its individual members.

## 9. Impact of memes on creating knowledge

A traditional evolutionary approach to knowledge building in the context of a project environment is that the construction of knowledge is an ongoing process at many different levels – biological, physiological, and social. It happens through a variation of existing pieces of knowledge and the selective retention of those which are new, which somehow contribute to the survival of subjects in their given environment [50]. Any absolutism or permanence disappears in this approach however; knowledge is still a passive tool developed by subjects (project managers or team members in the project context) to help them in their quest.

A memetic approach is very different. Memes are considered to use biological, physiological, and social systems to their own advantage as copying mechanisms, helping them replicate and spread. In this light, the PM community, its body of knowledge, and even the role of a project manager and project team is a product constructed by an ongoing evolution of independent fragments of knowledge competing for position and dominance.

As previously mentioned, memes entrench notions or beliefs in the human mind even though they may be false [16]. False however is not the same as "bad" for the believer. Meredith's [51] popular teaching of PM still puts forward the notion of the project life cycle, however Gersick [52] and [53] strongly suggests that projects do not really evolve in this manner. This is a good example of the project life cycle meme at work, spreading even though it may be false. Traditionally, the project life cycle considers projects to be born, grow, wane, and die, rather like a living organism [22] and [25]. However, a memetic approach would show the project life cycle meme to be a metaphor that illustrates how natural, organic, and non-threatening the practice of PM is; leaving us feeling safe, secure, and somehow familiar with the process, and open-minded to receive more PM memes. Another meme which may be false is Tuckman's [33] five-stage team-development sequence, still struggling for our attention since it has been proved to be an outdated or limited representation of reality [52]. A memetic approach gives us a new way of questioning the bastions of our PM knowledge.

## 10. Impact on organisations

Our human ability to mull over endless possibilities, to deal with distractions and still keep multiple goals and plans in mind, appears mostly to have grown out of a simple expansion in brain size [54]. Blackmore [16] suggests that our enormous human brain size has been created by memes, a product of genetic and memetic evolution. Projects and PM are therefore natural occurrences, and appear more and more in organisations

not because of conscious boardroom decisions but because PM is an ancient product of our evolved human predisposition. PM is literally in our human and cultural nature. Söderland [4] asks "why do project organisations exist?" Memetically, organisations have no choice in the matter if they are to roam around on the economic landscape of the future.

Fulmer's [13] research illustrates that a growing number of organisations are recognising that they are venturing into new, unfamiliar territory, and need to enrich their mental maps of the business landscape. He suggests that these adaptive organisations successfully use teams and PM as one structure to gain competitive advantage. An alternative memetic approach is that PM is shaping organisations for its own purpose, as memes about how to increase profits by delivering projects successfully begin to flood the organisational meme-pool. Project organisations may eventually dominate the economic landscape at the cost of creating highly unstable temporary work environments for individuals. We need to be aware of the memes in the organisational meme-pool and promote those that are beneficial to individuals.

## 11. New directions and questions for future research

Memetics allows us to describe how all human cultural behaviour, including PM, is driven by the same replicating process that drives the biological world. I suggest a new "memetic" research direction in the discipline of PM with the purpose to study, describe, and explain the memetic phenomena of PM in society, how it develops, spreads, and drives human behaviour.

Traditional PM research directions need not be abandoned, rather examined in a new way from a memetic perspective. Pinto [55] suggests in his review of the current state of PM thinking that benchmarking and PM BoK unification are two principle directions in which traditional research has been evolving.

### 11.1. Benchmarking

Benchmarking refers to the search for best practice to allow industry to gain the advantage of a shorter learning time. Memetic research could identify and isolate the "best practice" memes in the PM memeplex and memetically engineer them to be easily absorbed into any organisational structure. All organisations would then be able to gain the advantage of a shorter learning time.

### 11.2. PM BoK unification

Morris [56] illustrates the need for unification of all BoK's if the acceptance of PM among global organisations is to grow. A memetic approach views this unification as a "survival of the fittest" competition between PM memes, each one altering their environment to increase their chances of being replicated. Examples of this would be opening institutional membership to anyone willing to pay the subscription; accrediting PM courses, text books, and professional certification; conferences; online resources; publishing journals, and even sponsoring a research study to investigate the challenges of selling PM to senior executives [44].

## 11.3. Questions for future research

I envisage a memetic paradigm of PM opening up the field of enquiry of PM. Future memetic research in this discipline could, as a starting point, pursue the follow two questions further.

## 11.4. Why do people individually and collectively believe in project management?

Fulmer [13] considers PM to be one of the ingredients of the glue that holds the social structure of an adaptive organisation together. Spectator sports are memes. Sport, like PM, provides individuals with a sense of identity; it provides a common bond and united sense of purpose. Why do so many believe in PM? My premise is that PM appears to answer all sorts of human questions in the organisational setting such as; why are we doing this? Winch [57] suggests that a clear mission is essential for effective PM. However, he also points out that missions are rarely truly clear as they are inevitably politicized and a result of complex negotiations and trade-offs [58]. In this instance the PM "mission" or "vision" meme creates a feeling of purpose, but it is really only another story we learn to tell about the project. Further memetic research may uncover why we need to tell such stories.

## 11.5. Why does project management spread?

Traditionally, PM knowledge may pass from person to person by explicit means such as books, the internet, narratives, or academics teaching in university programmes. All these products and services are created by people to make our business lives easier and our organisations more productive. In a somewhat counter-intuitive way Blackmore [16] suggests that memetic selection created them. A memetic answer is that all PM books, websites, courses, software, and professional institutions have evolved as a result of competition between memes.

Too much research in the reasons for project success and failure has been blamed for poor project performance [4], [5] and [6]. Evaluating project performance has many dimensions [59] and [60], however a list of why projects fail can be easily found [2], [3] and [61]. Ask a group of PM practitioners "why do projects fail?" and a consensus quickly develops. Such lists appear in the first chapters of many mainstream PM books and course notes. The "why do projects fail" meme is strong. Some of the content of such a list may be supported by empirical evidence, some may be a story we have learnt to tell. A memetic approach to PM is as interested in the idea of such a list and why it gets copied, as it is the content of the list that generates behaviour. There is no doubt that the actual contents of the list will suffer from errors as it gets copied across different media, in different context, over time. However, the meme "why do projects fail" continues to spread. The meme "why do projects succeed" would be more powerful at creating positive and constructive behaviour for individuals and organisations, but the meme "why do projects fail" wins the memetic selection race. I suggest it wins by praying on our fears. Fear of uncertainty and of making the wrong decisions, fear of criticism or rejection for not conforming; or fear of failure and of appearing unprofessional [62]. Based on evolutionary psychology [63], Brodie [64] suggests that memes spread faster when they appeal to fundamental human instincts such as danger, food, and sex. Moreover, he suggests we have

"buttons" around these subjects. Perhaps a memetic approach to PM research will show that PM spread because it presses our danger buttons.

## 12. Concluding remarks

This paper has called on scholars and practising professionals of the discipline of PM to be aware of the mental models they use when conducting research or practising PM. I have put forward the case that the current traditional approach to PM research is distorting the reality of projects, and shifting our focus away from the important aspects of projects, their management, and how PM influences us individually and collectively.

I suggest that a memetic paradigm of PM be considered when indulging in this field of enquiry, and that a new memetic approach is initiated with the purpose of studying, describing, and explaining the phenomena of the PM memeplex and its impact on society.

My purpose for drawing attention to the PM memeplex is not simply to justify it, but to alert us to it. Not that we will be able to overcome it, as I do not believe we are able to step out of the evolutionary process and take it over. Rather that we should be aware of the illusions the PM memes create, try to identify those that more closely describe reality, and observe or create environments where memes other than those in the PM memeplex can evolve.

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